

Störmer, Carl.

Aus den Tiefen des Weltenraums bis ins Innere der Atome.
Leipzig. 1925. 195 p. illus. 19 $\frac{1}{2}$ cm.

Van den Broeck, A.

Het weerbericht van het Koninklijk meteorologisch instituut
van België in 1925. Brussel. 1925. iii, 22 p. illus. 32
cm. (N. Met. inst. van België. Verhandelingen. Boekd.
1.)

RECENT PAPERS BEARING ON METEOROLOGY

The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau

American botanist. Joliet. v. 32. January, 1926.

Frost-weeds. p. 18-21. [Abstr. art. by Humphreys.]

American meteorological society. Bulletin. Worcester, Mass. v. 7. January, 1926.

Alexander, W. H. A droughty year (1925) with bumper crops (in Ohio). p. 14-16. [Abstract.]

Fergusson, S. P. Strongest wind on record in the United States. p. 17-19.

Flora, S. D. Tornadoes of the Middle West. p. 13-14. [Abstract.]

Gregg, W. R. Upper air winds of central and eastern United States. p. 10-11. [Abstract.]

Pitman, Geo. W. Weather and potatoes in Wyoming. p. 14. [Abstract.]

Riley, John A. The wind factor and the air mail southward from Kansas City. p. 11-12. [Abstract.]

Woolard, Edgar W. Thermodynamics for the meteorologist. p. 19-20.

American society of heating and ventilating engineers. Journal. New York. v. 32. February, 1926.

Hartman, F. E. Has air a vital property? p. 67-72.

Annalen der Hydrographie und maritimen meteorologie. Berlin. 53. Jahrgang. Oktober, 1925.

Arnold-Alabieff, W. Die Eisverhältnisse im Finnischen Meerbusen während den Winter 1922 bis 1925 in Verbindung mit der Eisbrechertätigkeit. p. 312-318.

Petersen, P. Die Eisverhältnisse des Winters 1924/25 in den ausserdeutschen europäischen Gewässern. p. 319-326.

Speerschneider, C. J. Eisbildung und Eismeldedienst in dänischen Fahrwassern. p. 305-312.

Astronomie. Paris. 40. an. Janvier 1926.

Cabannes, J., & Dufay, J. Mesure de l'altitude de la couche d'ozone dans l'atmosphère. p. 34-36. [Repr. Comptes rendus.]

Astrophysical journal. Chicago. v. 63. January 1926.

Menzel, Donald H. The atmosphere of Mars. p. 48-59.

British association for the advancement of science. Report of the 93d meeting. Southampton. 1925.

Brunt, D. Periodicities in weather. p. 300. [Abstract.]

Johnson, N. K. A study of the vertical gradient of temperature in the atmosphere near the ground. p. 300. [Abstract.]

Shaw, Sir Napier. Trigger action in the atmosphere. p. 298. [Abstract.]

Simpson, G. C. The new ideas in meteorology. p. 15-29.

France. Académie des sciences. Comptes rendus. Paris. t. 182. 1926.

Buisson, H., & Jausseran, C. Sur les variations de l'ozone de la haute atmosphère. p. 232-234. (18 janv.)

Dufay, Jean. Polarisation de la lumière du ciel nocturne. p. 331-333. (1 fév.)

Franklin institute. Journal. Philadelphia. v. 201. February, 1926.

Swann, W. F. G. The origin of the earth's electric and magnetic phenomena. p. 143-176.

Geografiska annaler. Stockholm. Arg. 7. H. 3. 1925.

Afzelius, Gretl. Vieljährige Niederschlagsschwankungen im Umkreis der Alpen. p. 222-246. [Finds a period of about 34 years.]

Hygeia. Chicago. v. 4. March, 1926.

Hinsdale, Guy. A change of climate. p. 130-132.

Japanese journal of physics. Transactions and abstracts. Tokyo. v. 4. no. 1. 1925.

Nisi, Hisamitu. Experimental studies on eddies in air. p. 1-11.

Journal of geophysics and meteorology. Moscow. v. 1. no. 2. 1924.

Federov, E. Some results of hourly observations of cloudiness in Slutzk. p. 164.

Fredrics, G. The probable cause of the force of gravity. p. 194.

Isvekov, B. A new proof of the theorem of Bjerknes on circulation. p. 198.

Kalitine, N. On the possibility of application of Violette-Richards actinograph adapted as an integrator of solar and diffusive energy of radiation. p. 118.

Keller, L. Einige Betrachtungen über die Untersuchung des täglichen Ganges des spezifischen Volumens der Luft p. 105-106.

Khanevsky, W. Das gesammte System der Winde zwischen dem Äquator und dem 70ten Grade nördlicher Breite. p. 155-156.

Petelin, M. Numerical prediction of barometric values by means of isallobaric charts. p. 202.

Roschdestwensky, A. Ueber die Veränderung des Reduktionskoeffizienten für die Windgeschwindigkeit an der meteorologischen Station des Physikalischen Zentral Observatoriums zu Leningrad nach Beobachtungen von 1903 und 1919. p. 128.

Wegener, Kurt. Ueber künstliche Regenerzeugung. p. 165-167.

Weinberg, B. De l'application de la formule de M. A. Velikanoff (donnant la distribution de la vitesse d'un courant d'eau dans un canal d'après la verticale) à la distribution de la vitesse du vent d'après la hauteur. p. 96.

Welikanoff, M. Ueber die turbulente Strömung zäher Flüssigkeiten. p. 186-188.

Journal of scientific instruments. London v. 3. January, 1926.

Ower, E. A low speed vane anemometer. p. 109-112.

Marine observer. London. v. 3. March, 1926.

Garbett, L. G. Upper-air observations over the sea. p. 45-48.

Meteorological magazine. London. v. 61. February, 1926.

Bilham, E. G. The optics of the sunshine sphere. p. 1-5.

Brooks, C. E. P. Climatic changes in America. p. 11-13.

The deterioration of climate in Greenland. p. 13-14.

Globe, E. Wireless weather reports from Greenland. p. 10-11.

Ping, A. Wentworth. Smoking snow. p. 8-9.

Portable receiver for the electric cup anemometer. p. 14.

Russell, Spencer. "A red sky at night . . ." p. 15-17.

Salter, Mortyn J. Possible errors in annual rainfall totals obtained by the summation of daily records. p. 9-10.

Meteorologische Zeitschrift. Braunschweig. Band 42. Dezember 1925.

Albrecht, Fritz. Das geheizte Haarhygrometer als Messgerät des Wassergehaltes von Wolken und Nebeln. p. 468-477.

Conrad, V. Homogenitätsbestimmung meteorologischer Beobachtungsreihen. p. 482-485.

Ficker, H. v. Zur Austrocknung Innerasiens. p. 481-482.

Götz, F. W. Paul. Der Trübungsfaktor getrennter Spektralbereiche. p. 477-481.

Groissmayr. Über die Erhaltungstendenz der mittleren monatlichen Temperaturanomalien. p. 489-491.

Köhler, Hilding. Über Tropengruppen und einige Bemerkungen zur Genauigkeit der Tropfenmessungen, besonders mit Rücksicht auf Untersuchungen von Richardson. p. 463-467.

Kölzer, Joseph. Die Schallausbreitung in der Atmosphäre und die äußere Hörbarkeitszone. p. 457-463.

Korselt, E. Über die Störungen der regelmässigen täglichen Luftdruckschwankungen durch Sonnenfinsternisse. p. 485-487.

Peppler, W. Extremwerte der relativen Feuchtigkeit und die Schichtung in der Troposphäre. p. 487-489.

Pödder, Arnold I. Die durchschnittliche Wanderungsgeschwindigkeit der barometrischen Minima in Siberien. p. 491-492.

National academy of sciences. Proceedings. Washington, D. C. v. 12. January, 1926.

Millikan, R. A. High frequency rays of cosmic origin. p. 48-55.

Roebuck, J. R. The Joule-Thomson effect in air. p. 55-58.

- Nature. London.* v. 117. 1926.
 Climate changes in western America. p. 238-239. (Feb. 13.) [Reviews papers by Antevs and Huntington on tree rings and climate.]
- Hobbs, William Herbert. Greenland or polar front. p. 232-233. (Feb. 13.)
- Stewart, C. D. Weather prediction from observation of cloudlets. p. 270. (Feb. 20.)
- Nature. Paris,* 54 année. 1926.
 Mercanton, P.-L. Encore le "rayon vert." suppl. p. 49. (13 février.)
- Mascart, Jean. Témoignage de la faune dans les modifications du climat. p. 142-143. (27 février.)
- Nature magazine. Washington, D. C.* v. 7. March, 1926.
 Christman, W. W. Volcanoes of foam. p. 144. [Describes conical formations of frozen foam over breaks in ice covering a stream.]
- Schoonhoven, John J. Red snow. p. 148.
- Naturwissenschaften. Berlin.* 14. Jahrgang. 8. Januar 1926.
 Schubert. Verdunstung und Dampfmangel im Flach- und Berglande, in Nadel- und Buchenwäldern. p. 32. [Abstract.]
- Observatoire géophysique central. Recueil de géophysique. Leningrad.* t. 4, fascicule 3. 1925.
 Berg, E. Exzessive Regengüsse verschiedener Dauer im Europäischen Russland im Jahrzehnt 1903-1912. p. 9-27.
- Kalitine, N. N. La transparence de l'atmosphère d'après les observations faites à Sloutzk (Pavlovsk). p. 49-86.
- Savinov, S. J. The anomaly of temperature of 1924-25 according to the observations effected at the Magnetic meteorological observatory in Slouzk (Pavlovsk). p. 99-110.
- Schoenrok, A. Zahl der Frosttage und der Wintertage im Europäischen Russland. p. 28-48.
- Shostakowitch, W. B. The snow cover in eastern Siberia. p. 111-123.
- Wiese, W. Über die langfristige Vorhersage der Menge des Niederschlages in den zentralen und östlichen Teilen Russlands im April und Mai. p. 87-98.
- Philosophical magazine. London.* v. 1. February 1926.
 Brunt, D. Energy in the earth's atmosphere. p. 523-532.
- Nolan, P. J. The character of the ionization produced by spraying water. p. 417-428.
- Physical review. Minneapolis.* v. 27. February, 1926.
 Taylor, A. Holt, & Hurlbut, E. O. The propagation of radio waves over the earth. p. 189-215.
- Physico-mathematical society of Japan. Proceedings. Tōkyō.* v. 8. January 1926.
 Nukiyama, Daizo, & Nakata, Kin'iti. Atmospheric potential in lower stratum of atmosphere. p. 5-14.
- Physikalische Zeitschrift. Leipzig.* 27. Jahrgang, no. 2. 1926.
 Kolhörster, Werner. Apparat zur Messung der durchdringenden Strahlung. p. 62-63.
- Pontificia accademia delle scienze nuovi Lincei. Atti. Roma. Ann. 77.* 1924.
 Martinelli, G. Due eccezionali depressioni barometriche sull'Italia. p. 82-85. (Sess. II. 20 gennaio.)
- Palazzo, Luigi. Marco Dechevrens. p. 157-158. (Sess. VI-VII. 18 maggio-15 giugno.) [Obituary.]
- Popular astronomy. Northfield, Minn.* v. 34. March, 1926.
 Petersen, Max. The shadow bands. p. 217-218.
- Prussia. Meteorologisches Institut. Abhandlungen. Berlin.* Band 8, Nr. 1. 1925.
 Gessler, R. Die Stärke der unmittelbaren Sonnenbestrahlung der Erde in ihrer Abhängigkeit von der Auslage.
- Revue générale des sciences. Paris.* 37 an. 21. janvier 1926.
 Mascart, Jean. Les chotts algériens et le climat africain. p. 35-37.
- Royal astronomical society of London. Monthly notices.* v. 86. January 1926.
 Turner, H. H. On a period of approximately 9.2 years in the Greenwich observations of magnetic declination and horizontal force. p. 108-118.
- Turner, H. H. On an unsuccessful search for the 9.2-year magnetic period in sunspot records, with a new analysis of those records back to 1610. p. 119-130.
- Science. New York.* v. 63. March 12, 1926.
 Hobbs, William Herbert. Arctic explorations and the origin of storms. suppl. p. x.
- Scientific monthly. New York.* v. 22. March, 1926.
 Aldrich, L. B. Studying the sun in Chile. p. 258-261.
- Fairchild, Herman L. Changing levels of the Great Lakes. p. 193-199.
- Humphreys, W. J. Winter's music. p. 215-217.
- Sociedade de geografia. Boletim. Lisboa.* 40^a serie. Julho-setembro de 1922.
 Lima, Almeida. O problema de locomoção aérea e o serviço aerológico em Portugal. p. 320-322.
- Washington academy of sciences. Journal. Baltimore, Md.* v. 16. 1926.
 Austin, L. W. The present status of radio atmospheric disturbance. p. 41-46. (Jan. 19.)
- Fergusson, S. P. Meteorology of the total solar eclipse of January 24, 1925. p. 46-48. (Jan. 19.)
- Dorsey, N. Ernest. A lightning stroke. p. 87-93. (Feb. 19.)
- Fleming, J. A. The magnetic and electric survey of the earth: Its physical and cosmical bearings and development. p. 109-132. (March 4.)
- Wetter. Berlin. 43. Jahrgang. Januar 1926.
 Diesner, P. Der Geltungsbereich klimatologischer Stationen. p. 21-24.
- Meissner, Otto. Bemerkenswerte Witterungseignisse der letzten 10 Jahre (1916-1925). p. 17-21.
- Peppier, Albert. Die Meteorologie an den deutschen Hochschulen. p. 1-15.

SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING FEBRUARY, 1926

By HERBERT H. KIMBALL, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January, 1924, 52:42, January, 1925, 53:29, and July, 1925, 53:318.

From Table 1 it is seen that solar radiation intensities averaged slightly above February normals at all three stations except for a. m. observations at Lincoln.

Table 2 shows that the total solar and sky radiation received on a horizontal surface averaged below normal for all four weeks at the three stations for which normals have been determined.

No skylight polarization measurements were obtained at Madison, as the ground was covered with snow throughout the month. Measurements made on five days at Washington give a mean of 58 per cent with a maximum of 60 per cent on the 25th. These are close to the February averages for Washington.

TABLE 1.—Solar radiation intensities during February, 1926
 [Gram-calories per minute per square centimeter of normal surface.]

WASHINGTON, D. C.

Date	Sun's zenith distance										Local mean solar time
	Air mass										
	A.	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0
Feb. 5.....	mm.	cal.	mm.								
11.....	2.26	0.72	0.87	1.07	1.34	-----	1.33	1.20	-----	-----	2.18
16.....	1.52	-----	-----	1.07	-----	-----	-----	-----	-----	-----	1.45
17.....	1.96	0.75	0.93	1.09	-----	-----	-----	-----	-----	-----	2.26
20.....	2.74	0.64	0.79	0.92	1.18	-----	-----	-----	-----	-----	3.00
23.....	1.68	0.63	0.84	0.96	1.20	-----	-----	-----	-----	-----	2.62
24.....	3.45	0.60	0.82	0.95	1.07	-----	-----	1.38	1.17	0.92	0.80
26.....	1.96	0.60	0.82	0.95	1.07	-----	-----	-----	-----	-----	2.16
Means.....	3.00	0.92	1.00	1.16	1.25	-----	-----	-----	-----	-----	3.30
Departures.....	±0.00	+0.03	+0.02	+0.01	-----	+0.12	+0.15	+0.08	+0.04	-----	-----